

Roadway Design Unit

Staff Meeting Minutes

April 11, 2007

AASHTO Load Resistance Factor Design (LRFD)

As of October 1, 2007, structures which meet the following criteria shall be designed utilizing LRFD:

1. Structures over water that have not started the Preliminary Bridge Survey and Hydraulic Design Report.
2. Structures for grade separations which do not have approved Structure Recommendations.
3. Structures advertised for private engineering firm design, which meet criteria #1 or #2.

Please continue to coordinate with structure design concerning the substructure depth.

Strategic Highway Corridor Additions (US 401 & NC 150)

Two facilities have been added to the Strategic Highway Corridor Plan. US 401 from US 1 in Raleigh to I-85 in Norlina has been added to the system. NC 150 from US 321 in Lincolnton to I-77 in Mooresville has also been added. The vision for both of these facilities is a Boulevard.

General Assembly Audit Report on cost of NCDOT Transportation Improvement Program

The private engineering firm of PBS&J has been hired to complete a Value Engineering Study on several projects. The firm has 12 weeks to complete their work. The Co-Project Managers will answer all project-related questions. All other requests will go to Jon Nance. The following projects are being studied: R-2545, R-3403, R-3825, I-4744, R-2303A, U-3326B, U-3600, R-3833A&B, R-2813B, R-4430.

Strategic and Organizational Assessment

The firm of McKinsey & Company has been hired to help assess and develop the Department's strategic aspirations to meet the 21st century objectives of our state and all who use our transportation system. All DOT employees were asked to complete a survey that was developed by McKinsey & Company. Also, other internal assessments and management interviews were conducted. This process will give insight into our vision, internal coordination, and leadership capabilities.

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Identification of Stream and Wetland Mitigation Sites on Roadway Plans

Typically, on-site mitigation areas should be purchased as proposed right of way. On a limited basis, a conservation easement will be purchased for on-site mitigation. The Natural Environment Unit (NEU) will coordinate with the Right of Way Branch and the property owner to determine if a conservation easement will be utilized. The Hydraulics Unit, Roadway Design Unit, and NEU will coordinate this information on the roadway plans and the permit drawings before right of way acquisition begins. A new line style has been created for the conservation easement. It will be shown on each individual plan sheet. The conservation easement line style will not be added to the symbology sheet.

TIP Scheduling Process

Please see Debbie Barbour's memo dated March 30, 2007, detailing a timeline of the scheduling process was distributed during the meeting.

Post Let Field Reviews and General Field Reviews

On March 23, 2007, Ron Allen attended a meeting conducted by Debbie Barbour to brainstorm ways to encourage more managers to review projects under construction or projects recently finished. Formal guidance is being developed and will be distributed soon.

New Question for Pre-Let Field Inspection (PLFI) – Non-Gating Impact Attenuators

A new question has been added to the PLFI questions pertaining to the use of non-gating impact attenuators. "Are there any locations where a non-gating impact attenuator should be specified (temporary detours, temporary traffic pattern, etc.) although the completed project would only require a gating device?"

Guardrail Use on Bridge Replacement Projects

Every effort should be made to reduce the cost of a bridge replacement project. This includes eliminating additional guardrail except that which is needed to protect the ends of the bridge. Consideration should also be given to eliminating curve widening, using the 3-R Guide, and any other cost saving idea that would reduce the cost for a bridge replacement project on a local road with low traffic volumes.

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Right of Way Revisions Requesting Updates to Property Lines

Location & Surveys should be providing all property line updates at the request of the Division R/W Office. The R/W revision will be handled using the normal process once the updated property file is received from L&S and the R/W revision package is received from the Raleigh R/W Office. Please see the June 13, 2001 memo on the Roadway Web Site for specific details.

Functional & Preliminary Designs

Please see the Scope of Preliminary Designs memo from Greg Thorpe and Art McMillan dated April 23, 2007. This memo offers guidance on the distinction between Functional and Preliminary Designs to ensure the consistency of in-house design work and to ensure that contract scopes and workday estimates accurately reflect the true effort required.

Corridor Hearing Maps

Jim McMellon gave a presentation explaining new guidelines for the creation of a Corridor Hearing Map. The map should show all of the alternates on one map. The colors used to show each corridor should match the colors utilized in the Environmental Document. Ron Allen is preparing written guidelines for this procedure.

A list of Public Hearing Maps available in pdf format is on the Roadway Web Site.

Topics for Open Discussion

PMii

Most Squad Leaders should now have access to the system equal to that of the Project Engineer. This will allow the Squad Leader to input project information such as the number of parcels and relocations, number of structures and type, utility impacts, and project length. It is the Project Engineer's responsibility to determine how much flexibility they allow the Squad Leader to exercise with this new access upgrade.

A Contact Override button has been incorporated into the system. This button is located on the NCDOT Data tab. This will allow you to filter the correct the incorrect contacts so that the correct names will show up in the ZPSR25 report (Debbie's report).

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New Form Letter For “Request For Comments On 25% R/W Plans”

This new form letter will be used for all projects, except bridge replacements, so that the Hydraulics Unit can review the horizontal alignment, vertical alignment, and typical section of the project mainline. This letter also goes out to the Geotechnical Unit, Structures Unit, and the Utilities Unit. You can adjust the response time based on the length of project (typically, 2 months for a 2 to 4 mile project and 3 months for a longer project). Please delete Structure Design from the letter if there are no structures on the project.

Guardrail on Median Divided Facilities with a 46-foot Median

We discussed the use of rigid guardrail in the median on 6-lane facilities with a 46-foot median. This issue has been discussed in the Guardrail Committee Meetings but no final decision has been made. This issue was discussed due to the appearance of the cable guiderail in the superelevated sections of I-540. The top of the cable guiderail appears to be at a lower elevation than the median edge of travel lane in the superelevated sections of the facility. This could allow a vehicle to vault over the cable guiderail into on-coming traffic.

Minutes Approved By:

Original Letter Signed by Jay A. Bennett

Jay A. Bennett, PE
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